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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,597	04/30/2001	Antoni P. Tomsia	IB-1627	3236
8076	7590	02/28/2003		
LAWRENCE BERKELEY NATIONAL LABORATORY ONE CYCLOTRON ROAD, MAIL STOP 90B UNIVERSITY OF CALIFORNIA BERKELEY, CA 94720			EXAMINER	
			SPERTY, ARDEN B	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 02/28/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/845,597

Applicant(s)

TOMSIA ET AL.

Examiner

Arden B. Sperty

Art Unit

1775

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 24 December 2002.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other:

## FINAL REJECTION

### *Priority*

1. Applicant's claim for priority to Provisional Application 60/201,556 is denied.

The provisional application does not provide a specification disclosing the claimed invention, therefore there is no support for the claimed invention.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- cited in IDS, not in prior art.*
3. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by the Bioceramics: Materials and Applications III article titled "Glass-hydroxyapatite coatings on titanium-based implants" published in December 1999.

Regarding claim 1, the Bioceramics article teaches a multilayer article comprising a titanium alloy metal substrate (see abstract), a first layer having an inner and outer surface and comprising a glass/hydroxyapatite (HA) admixture having the claimed composition (see abstract, Table I and bottom of page 16).

Regarding claim 2, the reference discloses the article of claim 1 wherein there is a higher concentration of HA particles nearer the outer surface than the inner surface (page 17, lines 25-27; page 19, lines 3-8).

Regarding claim 3, the reference discloses the article of claim 1 having multiple layers (intermediate layers) (page 19, lines 5-8) comprising a glass composition as defined in claim 1 (see Table I).

Regarding claim 4, the first layer has a HA concentration of 40% (page 19, lines 5-8).

Regarding claims 5-6, the reference discloses the articles of claims 3 or 4 having a first intermediate layer having a HA concentration of 0%, a second intermediate layer having a HA concentration of 20%, and a first layer having a HA concentration of 40% (page 19, lines 5-8).

Regarding claim 7, the glasses may be chosen from any of those in Table I of the reference, therefore the limitations of the claim are met.

Regarding claim 8, the reference discloses the articles of claims 1 or 7 wherein the substrate is Ti6Al4V (see abstract).

Regarding claims 9-12, Table I of the reference discloses the claimed glass compositions on a substrate of Ti6Al4V and HA concentrations meeting the claim limitations.

Regarding claims 13-17 and 19, the reference discloses a multilayer article comprising a Ti6Al4V substrate (see abstract) having a first layer and n intermediate layers, the layers comprising the claimed glass composition (see Table I) and wherein the first layer has the highest HA concentration and each subsequent layer has a gradually decreasing HA concentration (page 19, first paragraph), all concentrations being within 1.0 to 50 %.

Regarding claim 18, the reference teaches the article of claim 13 having the claimed glass composition and a first layer comprising 50% glass and 50% HA (page 16, lines 32-33).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Bioceramics: Materials and Applications III article titled “Glass-hydroxyapatite coatings on titanium-based implants” published in December 1999.

Regarding claim 20, the reference discloses a multilayer article comprising a Ti6Al4V substrate (see abstract) having a first layer and 2 intermediate layers, the layers comprising the claimed glass composition (see Table I) and wherein the first layer has the highest HA concentration and each subsequent layer has a gradually decreasing HA concentration (page 19, first paragraph). Although the reference does not specifically disclose the gradation in SiO<sub>2</sub> concentration, such a gradient is inherently formed by variations in glass compositions. Absent a showing of unexpected results with a varying SiO<sub>2</sub> concentration no patentable distinction is seen between the instant claim and that of the prior art.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new grounds of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arden B. Sperty whose telephone number is 703-305-3143. The examiner can normally be reached on M-R, 08:00-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 703-308-3822. The fax phone numbers for

the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



abs

February 24, 2003

  
DEBORAH JONES

SUPERVISORY PATENT EXAMINER